

REMARKS

The Office Action mailed 27 December 2006 has been received and reviewed. Claims 41 and 64 have been amended, leaving claims 16, 17, 19-25, 41, 43-47, 49-54, 64, 66-70, 72-96, 100-104, 108-120, and 122-129 pending in the present application. Reconsideration and withdrawal of the outstanding rejections are respectfully requested.

Amended Claims 41 & 64

Claims 41 and 64 both have been amended to recite that the flaps in both structures are "non-centrally mounted to the valve seat relative to the orifice and in cantilever fashion" (where the added language is underlined). Support for the amendments to both claims can be found in U.S. Patent No. 5,867,767 at, e.g., Col. 3, lines 1-22 and Figure 4.

Claim 64 also has been amended to recite that "the flexible flap has a maximum transverse curvature at the location where the flexible flap is mounted to the valve seat" (where the added language is underlined). Support for amended claim 64 can be found in U.S. Patent No. 5,867,767 at, e.g., Col. 4, lines 2-8 and Figures 4-5.

The 35 U.S.C. §251 Rejections**A. Reissue Declaration**

Claims 16, 17, 19-25, 41, 43-47, 49-54, 64, 66-70, 72-96, 100-104, 108-120, and 122-129 have been rejected under 35 U.S.C. §251 as being based upon a defective reissue declaration. Applicant respectfully submits that the rejection cannot be sustained. The Supplemental Declaration submitted on November 4, 2005 in support of this reissue application indicated that the original patent was wholly or partly inoperative because the patentee had claimed more or less than the patentee had the right to claim. An error to be corrected by reissue was identified as follows:

In claims 1 and 10 by reciting that both 'said root end of the cantilevered flexible flap and the respective sealing surface that contacts the cantilevered flexible flap at said root end have a fixed curvature in a direction transverse to said longitudinal axis', Applicant believes that the claim is narrower than required by

the detailed description and the prior art since only the flap needs to have the transverse curvature to achieve the benefits of the invention.¹

In the most recent Office Action, the Supplemental Declaration was asserted to be defective because "the error which is relied upon to support the reissue application is not an error upon which a reissue can be based."² In particular, the Examiner stated that the alleged error "cannot be considered as a proper basis for a reissue application as the very limitations that are to be removed from the claims of this application are what were added by Applicant during prosecution of the original patent in order to overcome an applied rejection."³

Please understand, however, that there is no *per se* rule regarding removal of claim limitations that were inserted during prosecution of the original patent.

The only support cited for making the rejection pertaining to a defective reissue declaration was a general reference to 35 U.S.C. § 251 and to 37 C.F.R. § 1.175. Neither of these provisions, however, supports the position taken in the Office Action. In fact, § 251 explicitly allows for the reissue of patents when the inventor claimed "more or less than he had a right to claim in the [original] patent."⁴ Further, the *per se* approach taken by the Examiner, quoted above, has been expressly rejected by the Board of Patent Appeals and Interferences:

... it appears that the examiner has asked this Board to impose a *per se* rule of reissue recapture to prevent appellants from retreating from any claim limitation determined to have secured allowance of the original patent. For the reasons set forth below, we decline to do so.⁵

Thus, the reason asserted for rejecting the Declaration as being defective does not form a proper basis for maintaining the rejection. As such, the rejection cannot be properly sustained.

¹ *Supplemental Reissue Application Declaration And Power of Attorney By The Inventor*, pp. 1-2 (November 4, 2005).

² *Office Action*, p. 2 (Dec. 27, 2006).

³ *Id.* at p. 3.

⁴ 35 USC § 251 ("Whenever any patent is, through error without any deceptive intention, deemed wholly or partly inoperative or invalid, by reason of a defective specification or drawing, or by reason of the patentee claiming more or less than he had a right to claim in the patent, the Director shall, on the surrender of such patent and the payment of the fee required by law, reissue the patent for the invention disclosed in the original patent, and in accordance with a new and amended application, for the unexpired part of the term of the original patent. No new matter shall be introduced into the application for reissue.").

⁵ *Ex parte Eggert*, 67 USPQ2d 1716, 1717 (BPAI 2003).

B. Recapture

Claims 41, 43, 46, 64, 66, and 69 have been rejected under 35 U.S.C. § 251 for being an improper recapture of subject matter that was surrendered in the application for the patent upon which the present reissue application is based. Applicants respectfully submit that this rejection also cannot be properly sustained. Please note that this rejection was previously made in the Office Action mailed July 9, 2003. Applicants subsequent response mailed on October 16, 2003 resulted in this rejection being withdrawn. There are two very good reasons for why this rejection should again be withdrawn.

Firstly, the claims that are presently pending in this reissue application do not involve recapture estoppel because a patent Applicant is not estopped to seek reissue claims that are narrower in an aspect germane to a previously issued prior art rejection, even though they may be broader in some other regard than previously canceled claims.⁶ A comparison of the present claims to the claims surrendered during the original prosecution reveals that each of the claims that are now being rejected do indeed recite additional limitations germane to the prior art rejections, thereby avoiding recapture. For example, independent claim 41 states that the flexible flap is "non-centrally mounted to the valve seat" and that the flap has "maximum transverse curvature at the location where the flap is mounted to the valve seat." Claim 43 depends from claim 41; therefore, it avoids recapture estoppel for the same reason, plus it indicates that transverse curvature "decreases towards the free end of the flexible flap." Claim 46 also depends from claim 41, and therefore it too avoids recapture estoppel. Claim 64 also indicates that "the flexible flap has a maximum transverse curvature at the location where the flexible flap is mounted to the valve seat." As previously indicated, this limitation makes the reissue claim narrower in an aspect that was germane to a prior art rejection in the original application. As

⁶ *In re Clement*, 131 F.3d 1464, 1470, 45 USPQ2d 1161, 1165 (Fed. Cir. 1997) ("In both *Mentor* and *Ball*, the relevance of the prior art rejection to the aspects narrowed in the reissue claim was an important factor in our analysis. From the results and reasoning of those cases, the following principles flow: (1) if the reissue claim is as broad as or broader than the canceled or amended claim [the surrendered subject matter] in all aspects, the recapture rule bars the claim; (2) if it is narrower [than the surrendered subject matter] in all aspects, the recapture rule does not apply, but other rejections are possible; (3) if the reissue claim is broader [than the surrendered subject matter] in some aspects, but narrower [than the surrendered subject matter] in others, then: (a) if the reissue claim is as broad as or broader in an aspect germane to a prior art rejection, but narrower in another aspect completely unrelated to the rejection, the recapture rule bars the claim; (b) if the reissue claim is narrower in an aspect germane to [a] prior art rejection, and broader in an aspect unrelated to the rejection, the recapture rule does not bar the claim, but other rejections are possible."); *Mentor Corp. v. Coloplast, Inc.*, 998 F.2d 992, 27 USPQ2d 1521 (Fed. Cir. 1993); *Ball Corp. v. US*, 729 F.2d 1429, 221 USPQ 289 (Fed. Cir. 1984); *In re Richman*, 409 F.2d 269, 161 USPQ 359 (CCPA 1969); *Ex parte Eggert*, 67 USPQ2d 1716, 1729 (Bd. Pat. App. & Int. 2003).

such, recapture does not apply. Claims 66 and 69 depend from claim 64 and therefore also avoid the recapture rule.

Secondly, even if the Examiner were to hold that the narrowing limitations outlined above were not germane to a previously-issued rejection, the limitation deleted from the original claims, pertaining to the sealing surfaces having a transverse curvature, was not a feature that was relied on by Applicants to distinguish the claims 1 and 10 of the '767 patent over the prior art. Rather, the only feature that Applicants argued to overcome the prior art rejections was the transverse curvature of the flap. As a result, the recitations regarding transverse curvature of the sealing surfaces were not "germane to a prior art rejection" and thus the recapture rule would not apply for this reason as well.

Such a finding is supported by the Board's decision in *Ex parte Eggert*⁷ where the claims in a reissue application omitted limitations added during prosecution of the parent application, with the omitted limitations being found "not germane to a prior art rejection." As a result, the reissue claims were found not to implicate recapture. As in *Eggert*, the language added to claims 1 and 10 of the '767 patent regarding transverse curvature of the sealing surfaces was "an aspect unrelated to the rejection" in line with the test for reissue recapture as set forth in *In re Clement*.

The Examiner quoted a short excerpt from Applicant's remarks —which remarks were filed with Applicant's amendments to claims 1 and 10 during the original prosecution — to support the assertion that Applicants argued that the transverse curvature in both the flap and the sealing surfaces distinguished independent claims 1 and 10 from the prior art: "... independent claims 12 and 13 [claims 1 and 10 of '767 patent] have been drafted to more fully define the form of, and relationship between, the valve flap and the cooperating valve seat."

This quoted statement, however, did not establish that Applicants argued the patentability of claims 1 and 10 based on transverse curvature of both the valve flap and the sealing surfaces. The quoted excerpt merely describes the amendments. Applicant's comments were not specifically addressed to any of the rejections; nor did they indicate that transverse curvature of the sealing surface was required to overcome any rejections.

⁷ 67 USPQ2d 1716, 1731 (BPAI 2003).

When Applicants did present specific distinguishing remarks addressed to each of the cited references (Japuntich et al., Rinchart, Akiyama et al., and McKenna were cited in support of the anticipation rejections to support patentability of claims 1 and 10 of the '767 patent), those remarks/arguments focused only on the transverse curvature of the flap – not on the transverse curvature of the sealing surfaces. In other words, Applicants argued only the transverse curvature of the flap itself to establish patentability of issued claims 1 and 10 of the '767 patent. Applicants did not argue that the transverse curvature of the sealing surfaces distinguished the claims from the cited references.

C. New Matter

Claims 47, 49-54, 70, 72-96, 100-104, 108-120, and 122-129 have been rejected under 35 U.S.C. §251 as being based upon new matter added to the patent for which reissue is sought. Applicants respectfully submit that this rejection cannot be sustained. No new matter has been added to the patent application.

Independent Claim 47 & Dependent Claims 49-54

In support of the rejection of independent claim 47, the United States Patent and Trademark Office has taken the position that because "the entire 'stationary portion (is) ... held... in contact with... the seal ridge' it is not understood how the mounting of the flap in a manner which presses the flap 'towards the seal ridge (causes) a portion of the stationary portion (to) reside in non-alignment with the seal surface' as recited in the claim." *Office Action*, pp. 5-6 (December 27, 2006) (emphasis in original).

Applicants respectfully submit, however, that claim 47 does not recite that the "entire" stationary portion is held in contact with the seal ridge. Rather, claim 47 merely recites the following: "... the stationary portion of the flexible flap being held in a stationary position in contact with a portion of the seal ridge...." Claim 47 does not, therefore, preclude the existence of a portion of the stationary portion that is in non-alignment with the seal surface.

Support for claim 47 can be found in the '767 patent at, e.g., col. 3, lines 16-53 and in Figures 4-5. An exemplary portion of the stationary portion of the flap that is "in non-alignment with the seal surface" is depicted in connection with the embodiment of the invention described

therein can be found in the portion of the flap 7 that is acted on by the profiled block 16 (*see, e.g.*, Figure 4).

In view of the description identified above, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 47 and dependent claims 49-54 for reciting new matter.

Independent Claim 70 and Dependent Claims 72-85

In part, the new matter rejection of independent claim 70 is based on an objection to the use of the term "off-center" in connection with the mounting of the stationary portion of the flap. Applicants respectfully submit that the mounting of the stationary portion of the flap is off-center relative to the flap. Reference to, *e.g.*, Figure 4 of the '767 patent, shows that the stationary portion of the exemplary flap 7 (*i.e.*, the portion of the flap deflected by block 16 and extending leftward in Figure 4) is off-center relative to the flap because it is closer to one end of the flap than the other end of the flap.

In the reasoning presented to support this rejection, however, "off-center" is apparently interpreted as applying only to the width of the flap. Applicants respectfully submit that such an interpretation is too narrow and does not support a new matter rejection of independent claim 70.

The new matter rejection of independent claim 70 was also based on an objection to the portion of claim 70 which recites that mounting of the flap causes "at least part of the stationary portion to reside in non-alignment with the seal surface when viewing the flap in a longitudinal section (FIG. 4)."

Applicants respectfully submit that support for claim 70 can be found in the '767 patent at, *e.g.*, col. 3, lines 16-53 and in Figures 4-5. An exemplary part of the stationary portion of the flap that is "in non-alignment with the seal surface" can be found in the portion of the flap 7 that is deflected by the profiled block 16 (*see, e.g.*, Figure 4). When read in its full context, the portion of claim 70 objected to discusses the use of a member (*e.g.*, block 16) "to cause at least a part the stationary portion to reside in non-alignment with the seal surface" as recited in claim 70.

In view of the support identified above, Applicants respectfully request reconsideration and withdrawal of the rejection of independent claim 70 and its dependent claims 72-85 as reciting new matter.

Claim 81

Claim 81 is subject to the new matter rejection based on an objection to the use of the term "off-center" in connection with the mounting of the flap. Applicants respectfully submit that "the flexible flap is mounted to the valve seat off-center relative to the flap" as recited in claim 81 because the flap is mounted at one end of the flap. Reference to, e.g., Figure 4 of the '767 patent, shows that the stationary portion of the exemplary flap 7 (i.e., the portion of the flap deflected by block 16 and extending leftward in Figure 4) is off-center relative to the flap because it is closer to one end of the flap than the other end of the flap.

In the reasoning presented to support this rejection, however, "off-center" is apparently interpreted as applying only to the width of the flap. Applicants respectfully submit that such an interpretation is too narrow and does not support a new matter rejection of claim 81.

In view of the support identified above, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 81 as reciting new matter.

Independent Claim 86 and Dependent Claims 87-88

The new matter rejection of independent claim 86 was based on an objection to the use of the phrase "at least" in connection with the curvature imparted to the flexible flap. In particular, it is asserted that the phrase "at least" is improper because it "enlarges the scope of the claim." *Office Action*, p. 7 (December 27, 2006). Applicants respectfully submit that this rejection cannot be sustained.

Firstly, it is not necessary for the patent application to use the exact same words in an amended or added claim as those used in the specification.⁸ Applicants do not dispute that the '767 patent fails to explicitly recite the phrase "at least" in reference to the transverse curvature of the valve flap. The '767 patent, however, discloses that the flap may also have a longitudinal curvature in addition to transverse curvature (see, e.g., col. 3, line 62 to col. 4, line 7 and Figures 3-4). This description of the optional longitudinal curvature supports the use of the phrase "at least". The Examiner has Applicants' permission to add the words "at least" to the description by an Examiner's amendment.

⁸ *In re Anderson*, 471 F.2d 1237, 176 USPQ 331 (CCPA 1973).

Secondly, Applicants respectfully submit that if this reasoning did form a proper basis for sustaining the new matter rejection, then every claim with open-ended language (e.g., "comprising") would then also need to be rejected as failing to support the infinite variations of combinations and additional features that could be added to those features specifically recited in the claim.

For at least these reasons, Applicants respectfully request reconsideration and withdrawal of the new matter rejection of independent claim 86 and dependent claims 87-88.

Claim 87

Claim 87 also has been rejected for reciting new matter.

In part, the new matter rejection of claim 87 is based on the phrase "the profiled block engages the flap at a non-central location of the flap in a non-aligned relationship to the sealing surfaces." The Examiner is of the view that the "profiled block" recited in claim 86 (from which claim 87 depends) must only refer to profiled block 15. No particular basis for this assertion is presented and Applicants note that the exemplary embodiment described in the '767 patent discloses a "second profiled block 16" (col. 3, line 31) that meets the limitations set forth in both claims 86 and 87. In other words, the preferred embodiment itself discloses two different "profiled" blocks.

Further, the phrase "non-central location" was interpreted only with respect to width. Applicants submit that this interpretation is too narrow and that the block 16 of the exemplary embodiment does engage the flap at a "non-central location" as depicted in, e.g., Figure 4 of the '767 patent.

The new matter rejection of claim 87 is also based on the assertion that the exemplary embodiment depicts two blocks (15 and 16) that create the transverse curvature and, as a result, claim 87 is improper because it recites only the block 16 when describing the curvature.

Applicants respectfully disagree.

The portions of the '767 patent cited as support for these assertions are found only in the description of the preferred embodiment. The '767 patent describes the invention broadly in the Summary section (see, e.g., col. 1, line 66 to col. 2, line 31) where it is noted that the flap has transverse curvature without any indication that the transverse curvature must be provided by the exact combination of features recited in connection with the preferred embodiment. As a result,

Applicants submit that it is improper to limit the invention to the features described in connection with the preferred embodiment as asserted in connection with the rejection of claim 87.

For at least these reasons, Applicants respectfully submit that claim 87 is supported by the '767 patent. Reconsideration and withdrawal of the new matter rejection of claim 87 are, therefore, respectfully requested.

Claims 89-96, 100-104, 108-120, and 122-129

Independent claims 89, 92, 95, 104, 111, 120, and 122, along with their respective dependent claims 90-91, 93-94, 96, 100-103, 108-110, 112-119, and 123-129 have all been rejected as reciting new matter based on the assertion that block 16 alone does not impart curvature to the flap in the preferred embodiment of the invention as described in the '767 patent. Applicants respectfully disagree that the stated assertions are sufficient to support a new matter rejection of those claims.

The portions of the '767 patent which are cited as support for the assertions on which the rejections of claims 89-91 are based, are located in the detailed description of the preferred embodiment. The '767 patent, however, describes the invention broadly in the Summary section (*see, e.g.*, col. 1, line 66 to col. 2, line 31) where it is noted that the flap has transverse curvature without any indication that the transverse curvature must be provided by the exact combination of features recited in connection with the preferred embodiment. As a result, Applicants submit that it is improper to limit the invention to the features described in connection with the preferred embodiment as asserted in connection with the rejections of these claims.

For at least these reasons, Applicants respectfully submit that claims 89-96, 100-104, 108-120, and 122-129 are supported by the '767 patent. Reconsideration and withdrawal of the new matter rejections of these claims are, therefore, respectfully requested.

The 35 U.S.C. §102 Rejection

Claims 41, 43, 44, 64, 66, and 67 under 35 U.S.C. §102(b) as being anticipated by Cover (U.S. Patent No. 2,105,183). Applicants respectfully submit that this rejection cannot be sustained.

As amended, both independent claims 41 and 64 recite that the flexible flap is "non-centrally mounted to the valve seat relative to the orifice and in cantilever fashion."

In contrast, Cover discloses a flap that is mounted by the use of pins that are "centrally located."⁹ The apertures in the flap that receive the pins also are located centrally. As such, Cover does not disclose a flap that is "non-centrally mounted" as recited in claims 41 and 64.

Both independent claims 41 and 64 also recite that the flexible flap has a "maximum transverse curvature at the location where the flexible flap is mounted to the valve seat."

Although it is asserted that Cover discloses this feature, no specific portion of Cover is cited as support for the assertion. If it is the Examiner's intent to assert that Cover inherently discloses this feature, then Applicants respectfully submit that the requirements for establishing anticipation through inherency have not been met. "In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *M.P.E.P. § 112(IV), p. 2100-48, 8th Ed., Rev 5 (Aug. 2006)* (emphasis in original).

Because the rejection does not provide any such factual basis or reasoning to show why or how the "maximum transverse curvature at the location where the flexible flap is mounted to the valve seat," Applicants respectfully submit that the inherent nature of that feature has not been adequately established.

In addition, Cover does not describe a flap that is mounted "in cantilevered fashion." Cover's valve is centrally mounted.

For these reasons, Applicants respectfully submit that claims 41, 43, 44, 64, 66 and 67 are not anticipated by Cover. Reconsideration and withdrawal of this rejection are, therefore, respectfully requested.

⁹ See the '183 patent to Cover at page 1, column 55.

Summary

It is respectfully submitted that the pending claims 16, 17, 19-25, 41, 43-47, 49-54, 64, 66-70, 72-96, 100-104, 108-120, and 122-129 are in condition for allowance and notification to that effect is respectfully requested. The Examiner is invited to contact Applicant's Representatives, at the below-listed telephone number, if it is believed that prosecution of this application may be assisted thereby.

Respectfully submitted,

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